

Conference: The 2010 NASA Laboratory Astrophysics Workshop
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Title: "The Hubble Space Telescope: UV, Visible, and Near-Infrared Pursuits"
Presenter: Jennifer Wiseman

Abstract:

The Hubble Space Telescope continues to push the limits on world-class astrophysics. Cameras including the Advanced Camera for Surveys and the new panchromatic Wide Field Camera 3, which was installed on last year's successful servicing mission SM4, offer imaging from near-infrared through ultraviolet wavelengths. Spectroscopic studies of sources from black holes to exoplanet atmospheres are making great advances through the versatile use of STIS, the Space Telescope Imaging Spectrograph. The new Cosmic Origins Spectrograph, also installed last year, is the most sensitive UV spectrograph to fly in space and is uniquely suited to address particular scientific questions on galaxy halos, the intergalactic medium, and the cosmic web. With these outstanding capabilities on HST come complex needs for laboratory astrophysics support including atomic and line identification data. I will provide an overview of Hubble's current capabilities and the scientific programs and goals that particularly benefit from the studies of laboratory astrophysics.